ENVIRONMENTAL ASSESSMENT

Improved Lake Access to Blue Point Bay
Stewarts Point Area

April 2001

Lake Mead National Recreation Area

Clark County – Nevada

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

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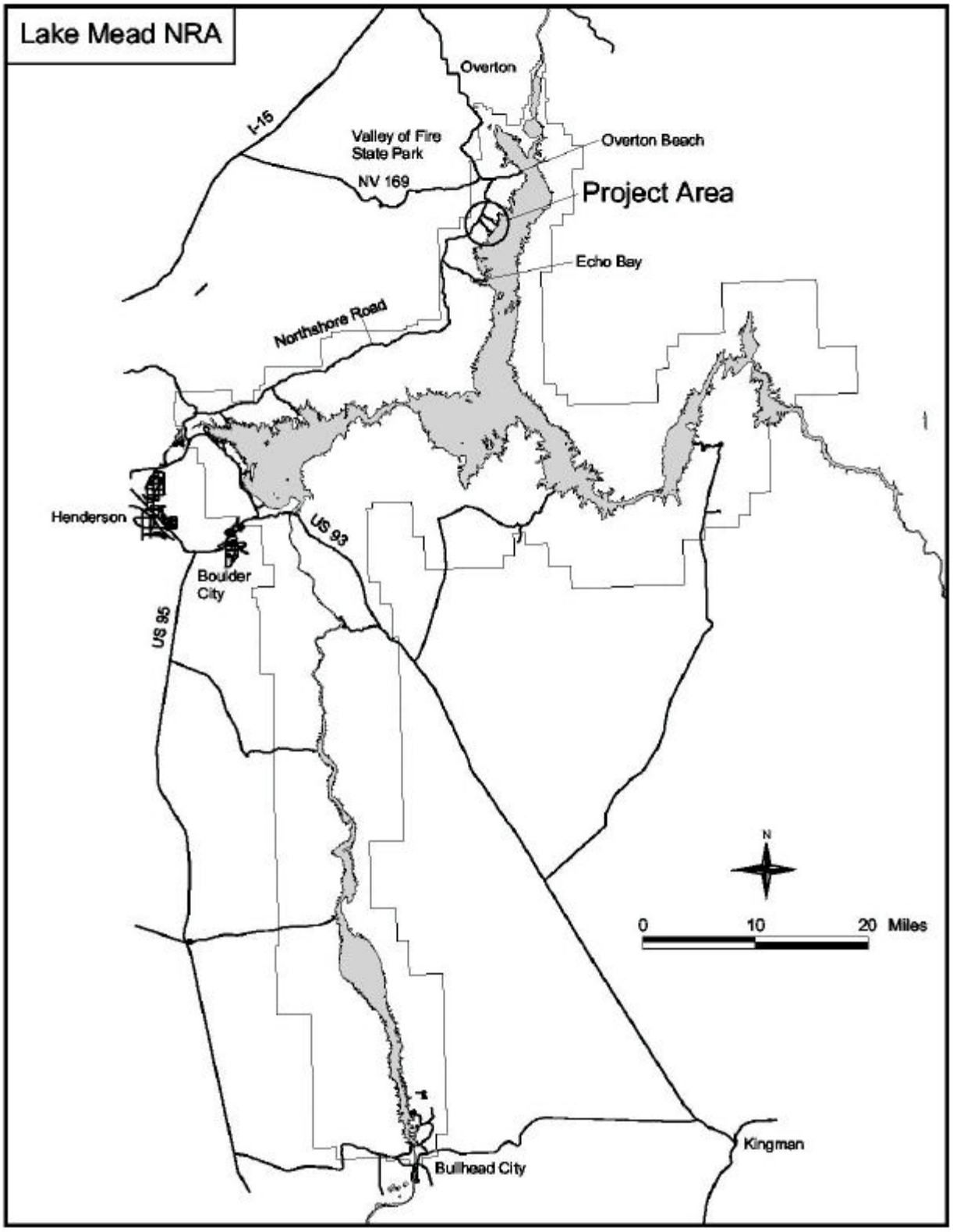
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PURPOSE AND NEED

The National Park Service (NPS) is considering improving access to Blue Point Bay within Lake Mead National Recreation Area (NRA). This document proposes three alternatives and analyzes the various environmental and public health and safety impacts of each alternative.

Currently, the only access to Blue Point Bay is via an unmaintained backcountry road that is hazardous in some areas and, at one point, skirts an eroding cliff. Due to the fact that travel on the defined road has become difficult at many locations, the width of the road increases each season from motorists traveling off the road onto softer, more navigable soil. Rare plant species, such as the Las Vegas bearpoppy, are being threatened by this activity and some of the resources in the area have already been significantly disturbed. This document analyzes three alternatives, a no-action alternative and two action alternatives that would close the backcountry road to motorized traffic and provide an alternate access road to Blue Point Bay from Stewarts Point.

BACKGROUND

Blue Point Bay (Figure 1) is located approximately 1 mile south of Stewarts Point on the Nevada side of Lake Mead. Visitors access Blue Point Bay via Approved Backcountry Road 108. The access to Road 108 is 0.3 miles south of the access to Stewarts Point on Northshore Road, and about 15 miles south of the community of Overton, Nevada. Prior to the high water of 1983, a road paralleling the shoreline from Stewarts Point to the terminus of Road 108 was in place.

As other areas of Lake Mead become increasingly congested, the Overton Arm of Lake Mead is receiving more visitors seeking a quieter environment. An increasing number of visitors are using Road 108 to access Blue Point Bay for fishing, camping, swimming and launching of small watercraft.

Lake Mead NRA has over 800 miles of approved backcountry roads. Most roads are approved for public use, while a few are only for management purposes. These backcountry roads are classified into three categories, Class I, Class II, and Class III. Class I roads are maintained at least twice per year. Class II roads are maintained at least once per year. Class III roads consist of the balance of all approved dirt roads not listed in the Class I and Class II list and will be maintained only when the road becomes impassable due to floods, slides or other events. These roads are usually posted “Recommended 4x4 only” where applicable. Road 108 is a Class III road.

Road 108 is on gypsum soil, which, after being used by motorized vehicles for an extended period of time, quickly erodes to parent material, becomes hard-packed, with bumps and potholes, creating difficult travel conditions. As the main road corridor becomes harder to travel, motorists increasingly travel off the designated road, widening the original road and significantly disturbing the resources in the area (Figure 2). One specific resource, the Las Vegas bearpoppy, is a rare plant species slated for protection in the Clark County Multiple Species Habitat Conservation Plan (MSHCP).

Vehicle travel off existing road surfaces, ruts soils with tires, pulverizes and disperses surface soil, compact the subsurface soil, demolishes surface crusts and protective layers of desert pavement, and crushes and destroys plants including fungus, algae, and lichens that bind the soil together. Once the desert soil has been broken, it is exceptionally vulnerable to wind, water, and mechanical erosion. Since the desert soils and plant cover restore themselves at an extremely slow rate, invading weed species may take over before native species restoration occurs. Thus, the soil-building plant and animal community can be permanently altered by illegal off-road travel.

In addition, an eroding cliff, approximately 60 feet deep, skirts the road on the south side in two locations, for 75 and 1000 feet, respectively. At some points, the road comes within 5 feet of an unstable cliff face that is subject to cracks and sloughing. Although the cliff is posted to prohibit motorized vehicles, some motorists have traveled on the opposite side of the posts and in a few locations there are tire tracks within a few feet of the cliff edge (Figure 3a-c).

The NPS wants to ensure that the public can access Blue Point Bay on a safe route without inflicting resource damage. Blue Point Bay provides a recreational experience that Lake Mead NRA visitors enjoy and that the NPS can preserve by ensuring continued access to this area.

Figure 1 – Blue Point Bay Use Area

Figure 2a – Illegal Roadbed Expansion – Road 108

Figure 2b – Illegal Roadbed Expansion – Road 108

Figure 3a – Road Skirting Cliff

Figure 3b – Cliff as Viewed From Vehicle Window

Figure 3c – Cliff Slumping & Cracking

RELATED NPS PLANNING DOCUMENTS

The 1986 General Management Plan (GMP) calls for a positive approach to providing water access for visitors in an environmentally sound manner that does not conflict with other uses. This approach is directed to meet the needs of the non-boating public that generally only have access to some of the more remote coves by vehicle. An additional issue identified in the GMP is that of limited existing shoreline access at the terminus of approved roads, resulting in many illegal access roads being created near the end of the road, as is the case with Road 108 (Figure 4).

Figure 4 – End of Road 108

The GMP also identifies various environmental problems associated with off-road vehicle use. Examples include the destruction of plant and animal life, the scarring of the natural landscape, the disturbance of soil, and the disturbance of ecosystems and cultural resources. The Lake Mead NRA Resource Management Plan (RMP) states that illegal off-road vehicle travel has caused some of the most significant detrimental impacts to the natural resources in the backcountry of the recreation area and has identified off-road travel as the greatest threat to soil resources. A specific objective of the RMP is to rehabilitate illegal tracks created by off-road vehicles and prevent additional damage from occurring.

In order to increase shoreline access, reduce illegal off-road travel, and reduce competition for beach space at the end of backcountry roads, the GMP recommends improving access to historically popular areas by providing roads that parallel the shore in one or both directions where physically possible. Blue Point Bay is one of these areas as it is included on the list of most desirable coves for boating and beach camping and it is also included as an outstanding natural feature in the GMP.

The GMP also identifies Stewarts Point as a development subzone and calls for improving the beach area and possibly adding an access road, a small parking area, launch ramp, restrooms, and level areas for camping. Adding an access road would serve to spread out the shoreline use in this area and help reduce visitor conflict.

The MSHCP specifically addresses the protection of Las Vegas bearpoppy, a rare plant species with habitat in the Road 108 and Blue Point Bay areas. The RMP states that the U.S. Fish and Wildlife Service identifies off-road vehicles as one of the most serious threats to the Las Vegas bearpoppy. Improving access to the area would reduce the incidents of motorists going off designated roads, aiding in the protection of this species.

This project also falls within the parameters of two goals of the Lake Mead NRA Strategic Plan; restoring a portion of disturbed park lands, and reducing damage to park natural and cultural resources from illegal activities such as off-road travel.

An additional document affecting this project is the 2000 Colorado River Interim Surplus Criteria Environmental Impact Statement (EIS). Lake level projections developed under this EIS show that water levels for Lake Mead are predicted to decrease over the next 15 years, and it is likely that lake elevation will not exceed 1190 feet during most of this period.

POTENTIAL ISSUES

The NPS has identified potential issues related to the environmental impacts that this proposal may present.

Soils and Vegetation. Las Vegas bearpoppy habitat may be disturbed by continued illegal off-road vehicle use. Invasive, non-native vegetation would be removed during construction of the proposed access road. If the chosen restoration method of Road 108 is to harvest cryptogams for inoculation into disturbed areas, healthy gypsum soil may be disturbed during the process. Soils and invasive, non-native salt cedar would be removed during the construction of the proposed access road.

Wildlife. The environmentally preferred alternative and alternative 3 would not likely result in any change in the diversity or numbers of any animal species. Noise from construction and restoration activities could temporarily disturb or displace wildlife. The no-action alternative may result in decreased diversity or numbers of animal species in the area surrounding Road 108.

Threatened and Endangered Species. Potential desert tortoise habitat, as well as Las Vegas bearpoppy habitat, is located in the project area.

Riparian Areas. Meadow Springs is located in a wash adjacent to Road 108 and has recently been restored. Visitation to this site may increase if a walking trail is constructed as it will be converted to a visitor destination point.

Air Quality. Air quality may be adversely affected from intermittent dust caused by heavy equipment use during the construction of the proposed access road.

Cultural Resources. One cultural resource site is located south of Road 108 near Meadow Springs. The no-action alternative could result in this site being damaged by continued illegal off-road vehicle activity along Road 108. In both the environmentally preferred alternative and alternative 3, no cultural resources would be impacted during the construction and use of the proposed road.

Visitor Use. Both the environmentally preferred alternative and alternative 3 would provide an easier access to the lake at Blue Point Bay. The environmentally preferred alternative may increase traffic and visitation in the Stewarts Point area. Four-wheel drive enthusiasts may be affected by the closure of Road 108. Increased visitation is likely to lead to increased litter in the area, which could negatively impact the visitor experience.

Safety. Improved lakeshore access may decrease emergency medical response time to Blue Point Bay. In addition, illegal off-road use of Road 108 is unsafe and potential hazards to vehicles from rough terrain and dangerous conditions exist in the area; these hazards could be reduced by providing an alternate access road to Blue Point Bay. This proposal would provide a safer recreational environment.

Water Quality. Improved shoreline access may result in increased visitation, which could lead to increased shoreline pollution and sanitation issues that could adversely affect water quality.

Recreation Area Operations. This proposal would promote protection of the natural and cultural resources of the area by reducing illegal off-road activity. Increased visitor use could put increased demands on law enforcement and maintenance services in the area.

Issues Considered but Dismissed from Further Consideration

Several issues were considered during the planning process but were considered insignificant. Socioeconomic resources would not be impacted by this project since visitor use patterns are not negatively affected. None of the alternatives would have adverse impacts on wild and scenic rivers as there are none in the area. The project area is not located in a sole or principle drinking water aquifer, prime farmlands, wetlands, or floodplains, so no adverse impacts would occur to any of these areas. Since the project area is not in a designated ecologically significant or critical area and is not listed on the Department of the Interior's National Registry of Natural Landmarks, no impacts would occur to these resources. The project area is not within any designated or

potentially designated wilderness areas and therefore would not adversely affect the qualities and characteristics of any wilderness areas.

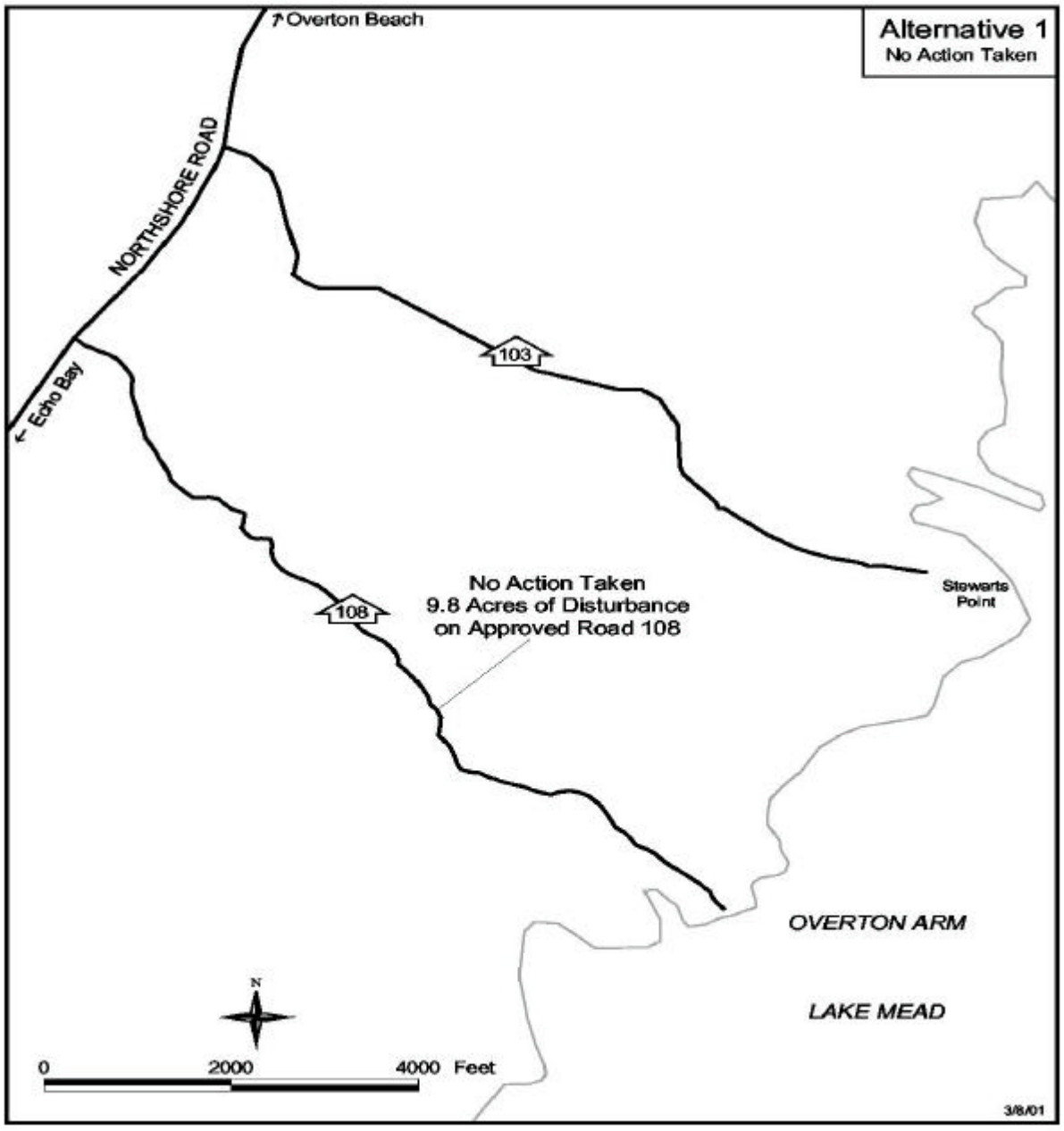
Table 1. Description of Alternatives

Alternative 1 No Action	Alternative 2 Preferred Action	Alternative 3
No improvement of any access roads from Stewarts Point. Road 108 would remain open to vehicular access.	Create a new access road from Stewarts Point below the high water mark, between 1201 and 1205 feet. Close road 108 to vehicular access. Designate a walking trail from Northshore Road to Meadow Springs wash using the old roadbed from road 108.	Create a new access road from Stewarts Point at the high water mark. Close road 108 to vehicular access. Designate a walking trail from Northshore Road to Meadow Springs wash using the old roadbed from road 108.

DESCRIPTION OF ALTERNATIVES

Alternative 1 - No Action

Under the no action alternative, Road 108 would remain in place and stay open. No rehabilitation or restoration would take place and a new access road would not be constructed.



Elements Common to All Action Alternatives

Under all of the action alternatives, existing Road 108 would be closed to vehicular traffic, while access to Blue Point Bay would be maintained through the creation of an alternate route. The entrance to the road from Northshore Road would be barricaded with guardrails and road closure signs would be posted. The terminus of Road 108 and all of the spur roads at Blue Point Bay would also be barricaded in order to prevent motorized access to the old roadbed.

Road 108 would be barricaded at Northshore Drive and at the locations where it intersects the Overton Power road. The access point to the Overton Power road from Northshore Drive would be gated and barricaded with 25-foot long guardrails on either side of the gates. The NPS would work with Overton Power to construct the gates and guardrails for the powerline road access points.

In the initial phase, the first 100 feet of Road 108 would be rehabilitated to make it less obvious and improve the habitat (Figure 5). The most current restoration practices would be used. This may include breaking up the compacted gypsum soil with heavy equipment to make it look more rugged and natural, as well as to enable vegetation to reestablish itself, and harvesting cryptogams from healthy gypsum soil in nearby areas and inoculating them into the freshly broken soil. Another restoration process that may be used would be to cover the roadbed with rocks of a color blending with the surrounding soil, to prevent further erosion and provide a catchment for seeds and dust, as well as aid soil rebuilding. The remainder of the old roadbed would also be rehabilitated using the most current restoration practices as funding and manpower became available. During the second phase of restoration, since the access point to Road 108 would be restored and no longer viable for vehicular travel, access to closed Road 108 would be obtained through the Overton Power road or via the terminus at Blue Point Bay.

The first 2800 feet of Road 108 would be converted into a walking trail terminating at Meadow Springs, located in a wash adjacent to the existing road. This area is being restored, and in the future, should make an excellent location for nature studies and bird watching. No facilities would be constructed. Access to the trail would be from Northshore Road, with parking across the road at Blue Point Springs. No motorized access to Meadow Springs would be permitted. This prohibition would apply universally and include NPS maintenance activities along the trail and at the site. For each action alternative the walking trail would be completed in conjunction with the restoration of Road 108. The timelines for the two alternatives vary slightly based on other factors significant to each alternative. These timelines are outlined below within each alternative description.

Figure 5 – Road 108 Entrance from Northshore Road

Alternative 2 – The Environmentally Preferred Alternative
Create a New Access Road Below High Water Mark

This alternative would establish a 5200-foot access road, 16 feet wide from Stewarts Point to Blue Point Bay at elevation 1205 feet. The road would be designated as an official backcountry road with at least three spur roads each distinguished by a berm to provide additional shoreline access. Since the level of use in this area currently does not justify establishing designated parking, it is expected that visitors would park along the road shoulder or at the end of the spur roads near the shoreline. If the use in this area should increase to a level requiring designated parking, this issue would be reconsidered at that time.

A post and cable barrier would be constructed on the uphill side (east side) of the road to prevent illegal off-road use. Heavy equipment would be used to grade the roadbed and dig the holes for the barrier posts and a work crew would construct the post and cable barrier. The soils in this area are relatively stable and would not require reinforcement. Since the terrain is relatively level, it is likely that construction of culverts and drainage ditches would not be necessary and the road could be bladed with minimal cut and fill.

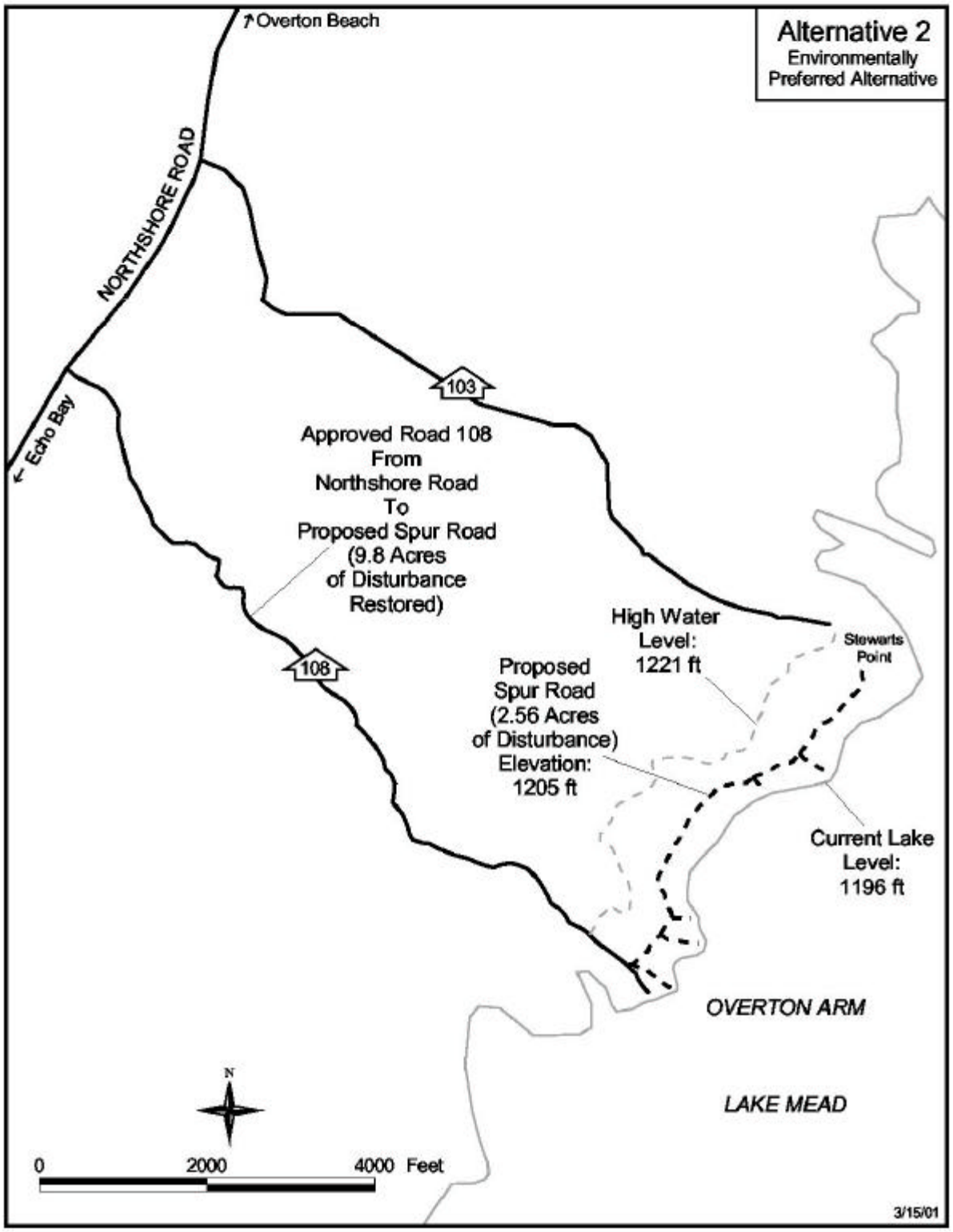
Removal of salt cedar, an alien plant species, would take place along the shoreline paralleling the road to increase the usable shoreline area.

Signage would be posted at the entrance to Road 108 to inform the visitor that the road is closed to motorized use but that alternative access to Blue Point Bay is available via the Stewarts Point Access Road 0.3 miles north. Additional signage would be posted at the terminus of Road 108, informing the visitor that the road is closed to motorized use.

The total new surface disturbance caused by the improvement of this road and the installation of spur roads and a post and cable barrier would be 2.56 acres.

This project would be completed in three phases:

1. Construct the new approved road, with spur roads for lakeshore access and a post and cable barrier along the uphill side, starting at Stewarts Point and extending to Blue Point Bay. This phase would be initiated and completed in May 2001.
2. Close Road 108 and rehabilitate the first 100-foot segment of the roadbed. As funding becomes available, the roadbed would be restored to the Meadow Springs area (2800 feet) and converted into a walking trail. To ensure that access to Blue Point Bay is not interrupted, this phase would not be initiated until completion of the access road. This phase would be completed by June 2001.
3. Complete rehabilitation of Road 108 as funding allows. A timeline for this phase has not been established as it is unknown when funding would be available.


Alternative 2
Environmentally
Preferred Alternative
Overton Beach
NORTHSHORE ROAD
Echo Bay
103
Approved Road 108
From
Northshore Road
To
Proposed Spur Road
(9.8 Acres
of Disturbance
Restored)
108
High Water
Level:
1221 ft
Stewarts
Point
Proposed
Spur Road
(2.56 Acres
of Disturbance)
Elevation:
1205 ft
Current Lake
Level:
1196 ft
OVERTON ARM
LAKE MEAD
N
0
2000
4000 Feet
3/15/01

Alternative 3
Create an Access Road at High Water Mark

A 5100-foot access road, 16 feet wide, from Stewarts Point to Blue Point Bay at the high water mark (approximately elevation 1221 feet) would be improved and designated as an official backcountry road with at least three spur roads each distinguished by a berm to provide additional shoreline access. Since the level of use in this area currently does not justify establishing designated parking, it is expected that visitors would park along the road shoulder or at the end of the spur roads near the shoreline. If visitor use in this area should increase to a level requiring designated parking, this issue would be reconsidered at that time.

The roadbed would require reinforcement and a post and cable barrier would be constructed on both sides of the road to prevent illegal off-road use and protect sensitive Las Vegas bearpoppy habitat. Heavy equipment would be used to grade the roadbed and dig the holes for the barrier posts and a work crew would install the posts and cable. Due to the uneven, rugged nature of the terrain, the road would need to be cut and filled in various locations and culverts and drainage ditches would be required. Las Vegas bearpoppy habitat is abundant in the area where the access road is proposed.

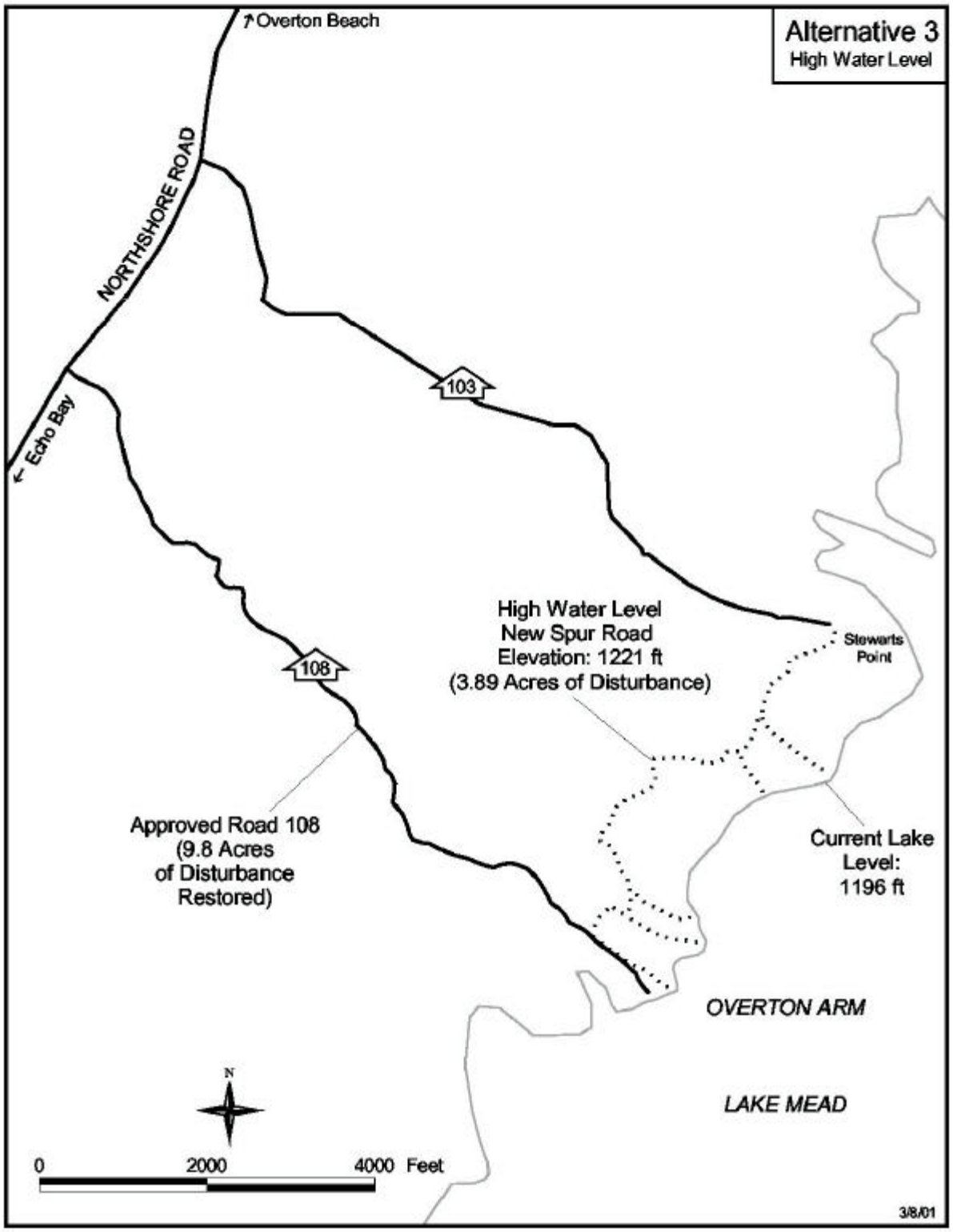
Removal of salt cedar would take place along the shoreline paralleling the road to increase the usable shoreline area.

Signage would be posted at the entrance to Road 108 to inform the visitor that the road is closed to motorized use but that alternative access to Blue Point Bay is available via the Stewarts Point Access Road 0.3 miles north. Additional signage would be posted at the terminus of Road 108, informing the visitor that the road is closed to motorized use.

The total new surface disturbance caused by the improvement of this road and the installation of spur roads and a post and cable barrier would be 3.89 acres.

This project would be completed in three phases:

1. Construct the new approved road, with spur roads for lakeshore access and a post and cable barrier along both sides of the road, starting at Stewarts Point and extending to Blue Point Bay. This phase would be initiated in May 2001 and completed in June 2001.
2. Close Road 108 and rehabilitate the first 100-foot segment of the roadbed. As funding becomes available, the roadbed would be restored down to the Meadow Springs area (2800 feet) and converted into a walking trail. To ensure that access to Blue Point Bay is not interrupted, this phase would not be initiated until completion of the access road. This phase would be completed by July 2001.
3. Complete rehabilitation of Road 108 as funding allows. A timeline for this phase has not been established as it is unknown when funding would be available.


Alternative 3
High Water Level
Overton Beach
NORTHSHORE ROAD
Echo Bay
103
108
High Water Level
New Spur Road
Elevation: 1221 ft
(3.89 Acres of Disturbance)
Stewarts Point
Approved Road 108
(9.8 Acres
of Disturbance
Restored)
Current Lake
Level:
1196 ft
OVERTON ARM
LAKE MEAD
N
0
2000
4000 Feet
3/8/01

MITIGATION AND MONITORING

Mitigation measures are specific actions that when implemented reduce impacts, protect park resources, and protect visitors. The following mitigation would be implemented under each alternative, except the no-action alternative, and are assumed in the analysis of effects for each alternative.

Soils and Vegetation. The most current restoration practices would be used to restore the soils on Road 108. This may include either covering the roadbed with rocks of a color that blends with the surrounding soils or breaking up the compacted gypsum soils on Road 108 and inoculating cryptogams from nearby healthy soil into disturbed areas. The rock cover would prevent further erosion and provide a catchment for seeds and dust to aid soil rebuilding. Breaking up the compacted gypsum soil, and harvesting and inoculation of cryptogams would provide a good soil base for native vegetation to repopulate the area. If this practice would be used, cryptogams would be hand-harvested from small, noncontiguous areas. Experiences harvesting cryptogams have demonstrated that the soil from which the cryptogams are harvested is able to heal itself within a reasonable period of time, provided that it remains undisturbed.

Surveys for vegetation, especially Las Vegas bearpoppy, have been conducted and an abundant population of bearpoppy habitat was found along the high water mark at the location of the proposed access road in Alternative 3. No bearpoppy habitat was found in the area of the proposed access road in the environmentally preferred alternative (Alternative 2). However, since bearpoppy habitat exists above the location of the proposed road, a post and cable barrier on the uphill side of the road would be constructed to prevent illegal off-road use and to protect the bearpoppy habitat. If an access road is constructed in bearpoppy habitat, the road would be routed so that the least amount of bearpoppy would be disturbed. In addition, barriers would be constructed on both sides of the road to prevent illegal off-road use and further disturbance of the bearpoppy habitat.

Threatened and Endangered Species. During the restoration process, a resource specialist would be on site at all times when heavy equipment is being used to monitor for desert tortoise habitat. If any tortoises are found during the process, work would be halted until the resource specialist can assess the situation.

Air Quality.
Dust permits are not required per Clark County regulations. During construction, the work area would be watered regularly to prevent excessive dust particles from being released in the area.

Cultural Resources. A cultural resource inventory was conducted in the project area, including the location of the proposed access roads and the restoration zone along Road 108. One cultural resource site was located along Road 108 near Meadow Springs Wash. An archaeological monitor would be on-site during restoration activities in order to prevent damage to the site.

Visitor Use. Under Alternatives 2 and 3, Road 108 would not be closed until the access road was completed to ensure that access to Blue Point Bay is not interrupted. Any construction of a new access road would neither interfere with nor deny access to the vacation cabin sites at Stewarts Point.

Safety. Under Alternatives 2 and 3, during construction of the access road, visitors would be routed away from construction areas. Barricades would be placed around the construction area to prevent visitor entry. For all action alternatives Road 108 would be closed prior to initiating restoration work so that visitor safety would not be jeopardized.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER EVALUATION

Several alternatives were discussed during the analysis process, but were eliminated from further evaluation. This section describes the alternatives that were considered and provides justification for their elimination.

The improvement of approved Road 108 was considered but ruled out from further evaluation. The road is currently sloughing off in an area where there is a cliff face and it would be unfeasible to repair this segment without major re-engineering, placement of structures, and/or cutting and filling, which would be a significant cost, as well as creating additional resource damage. In addition, continued use of the gypsum roadbed would result in more areas being compacted, resulting in continued off-road travel, widening of the existing road, and resource degradation.

Placing an access road at an elevation below 1200 was considered but ruled out from further evaluation. The great potential for the lake level to rise above the road site makes this proposal unfeasible.

Closing and rehabilitating Road 108 and not constructing a new access road along the shoreline was considered but ruled out from further evaluation. Under this proposal, lakeshore access would decrease, which could result in increased visitor congestion and potential conflicts along the shoreline in the Stewarts Point area. Since this proposal would completely close vehicular access to Blue Point Bay, visitors would likely continue to gain access to the bay by illegally driving off-road, which may significantly increase resource damage in the area. Overall this proposal conflicts with the Lake Mead NRA planning documents and the Strategic Plan objective of increasing shoreline access and reducing visitor congestion.

PERMIT REQUIREMENTS

This project does not require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11900 (Protection of Wetlands), or the Fish and Wildlife Coordination Act.

Since the NPS would be performing all construction work, a dust permit is not required per Clark County regulations.

AFFECTED ENVIRONMENT

This section describes the portion of the natural and human environment that may be affected by the proposal and alternatives under consideration. A complete and detailed description of the environment and existing use at Lake Mead NRA can be found in the1999 Resource Management Plan, and 1986 General Management Plan.

Soils and Vegetation

The area around Road 108 consists mainly of gypsum soils, with abundant cryptogams. The cryptogamic crust (soil surface) is an important component effecting the vegetation within the recreation area. Composed of fungus, algae, lichen, and mosses that grow on or just below the soil surface, the crusts play an important role in desert soil stabilization. They have the potential of slowing soil erosion by both wind and water, enhancing infiltration of precipitation and surface runoff, and stimulating vascular plant growth through improved soil, water, and available nitrogen relations.

Vegetation inventories were completed on January 11, 2000 and March 1, 2001 by the park botanist. The primary vegetation in this area consists of the Gypsum Barren Scrub community, and includes shrubs such as indigo bush (*Psorothamnus fremonti*), sandpaper plant (*Petalonyx parryi*), bursage (*Ambrosia dumosa*), catclaw (*Acacia greggi*), creosote bush (*Larrea tridentata*), apricot mallow (*Sphaeralcea ambigua*), and shadscale (*Atriplex confertifolia*). Two additional plants which are covered in the MSHCP are sunrays (*Enceliopsis argophylla*), and ringstem (*Anulocaulis leiosolenus*). The Las Vegas bearpoppy, a rare plant species, is abundant in the affected area. A summary of the results of the inventories and the required mitigation measures are presented in the *Mitigation and Monitoring* section of this document.

The proposed access road would be located near the lakeshore in an area that, until very recently, has been underwater for approximately 5 years. The primary vegetation in the area is salt cedar, an alien species. The salt cedar extends along the entire shoreline and many of the mature specimens are dead since they have been submerged, however, new plants have sprung up since the water level has dropped. Although the salt cedar is abundant it is not overly dense and is easily navigable on foot. There were no Las Vegas bearpoppy found in this area. The presence of salt cedar indicates high salt content in the soils along the lakeshore. These soils are sandy and gravelly and are considered low quality soils.

Wildlife

The wildlife habitat in the area around Road 108 supports primarily small mammals, such as ground squirrels, jackrabbits, kangaroo rats, and coyotes and kit foxes. Reptile species are common. It is expected that bird species will rehabitate the Meadow Springs area once restoration is complete.

The habitat closer to the lakeshore, in the area proposed for the new access road, consists primarily of non-native salt cedar, and is considered low quality wildlife habitat.

The desert tortoise is the only federally listed threatened terrestrial species known to inhabit the area. The tortoise was federally listed in Nevada in 1990 and the RMP lists illegal off-road vehicle use as one of the threats to wildlife in the recreation area. A wildlife inventory of the affected area was completed on February 21, 2001. No desert tortoise habitat was found in the area surrounding the proposed access roads. The area surrounding Road 108 down to Meadow Springs is potential desert tortoise habitat, however, no tortoise sign was found at the time of the inventory.

Riparian Areas

The Meadow Springs riparian area is located in a wash south of Road 108. The springs are currently being restored by the removal of non-native salt cedar and replanting of native vegetation.

Air Quality

Lake Mead NRA is designated as a Class II air quality area. The air quality in the Lake Mead region is generally good. Most reductions in air quality are due to air flows from the Las Vegas basin west of the recreation area.

Cultural Resources

Humans have lived in the southern Nevada area for around 12,000 years. The early prehistoric peoples were hunter-gatherers. Around 2,000 years ago, small-scale agriculture was developed around springs and along dependable waterways. Historically there have been several Euro-American groups utilize the area, including explorers, traders, settlers, miners, and ranchers.

A cultural resource inventory was conducted for the project area, including the location of the proposed roads and the restoration zone along Road 108, in March 2001 (Svinarich 2001). One prehistoric site was located consisting of a circular rock alignment that may mark the location of a temporary habitation. The inventory report will be used by the National Park Service to complete consultation with the State Historic Preservation Officer (SHPO) in accordance with the requirements of Section 106 of the National Historic Preservation Act.

Cultural resources survey for compliance with the National Historic Preservation Act has been completed. One prehistoric site was located near Road 108 in the Meadow Springs wash area, consisting of a circular rock alignment that may mark the location of a temporary habitation. The site will be avoided by all project activities.

Visitor Use

The shoreline at Stewarts Point is a popular summertime weekend destination. At peak use, Stewarts Point can have 100 vehicles parked along the shoreline. Vacation cabin site lessees also use the shore area at Stewarts Point. These cabin sites are on federal land and leased to private site renters. The cabin sites are only allowed to be used for intermittent, non-commercial, recreational purposes. The lowest road accessing the cabin site area is approximately 1095 feet

from the location of the proposed access road. Road 108 provides shoreline access to Blue Point Bay, an area that receives a low level of visitation and is used primarily by visitors seeking shoreline access in a quiet, remote setting (fishing, swimming, day use).

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Soils and Vegetation	Damage to rare plants and sensitive habitat from illegal off-road vehicle use would continue and potentially increase in the area. Soils would be compacted further and widening of the road would continue. Damage to the cryptogamic soil and the disturbed surface area would increase indefinitely. Currently, 9.8 acres of gypsum soil have been disturbed through the use of Road 108.	Damage to the rare plants and sensitive habitat surrounding Road 108 from illegal off-road vehicle use would be eliminated. No impacts would occur to native vegetation in the area where the new access road is proposed. Disturbance of the soil in the Road 108 area would decrease and restoration of the old roadbed would improve the overall soil quality. Construction of the proposed access road would result in 2.56 acres of new soil disturbance.	Damage to the rare plants and sensitive habitat surrounding Road 108 from illegal off-road vehicle use would be eliminated. Las Vegas bearpoppy habitat would be disturbed, and some plants destroyed, during the construction of the proposed access road. Disturbance of the soil in the Road 108 area would decrease and restoration of the old roadbed would improve the overall soil quality. Construction of the proposed access road would result in 3.89 acres of new soil disturbance. Soil structure on the new access road may be altered during stabilization of the roadbed.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Wildlife	Continued illegal off-road use in the Road 108 area may increase the amount of disturbed or destroyed wildlife habitat in the area. Destruction of habitat may permanently displace wildlife. Noise from off-road vehicles may temporarily displace wildlife.	Construction and restoration activities may temporarily displace wildlife from the project area. Disturbance of wildlife habitat in the Road 108 area would decrease. The wildlife habitat in the area of the proposed access road is considered low quality due to the monoculture of exotic tamarisk. As such, no permanent impacts would occur to wildlife in this area.	Same as Alternative 2.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Threatened and Endangered Species	Continued illegal off-road use could decrease the amount of available habitat for desert tortoises. Las Vegas bearpoppy habitat may be destroyed by illegal off-road use in the Road 108 area.	Closure of Road 108 would decrease illegal off-road vehicle use in the area, reducing and possibly eliminating a serious threat to the habitats of both the desert tortoise and the Las Vegas bearpoppy.	Closure of Road 108 would decrease illegal off-road vehicle use in the area, reducing and possibly eliminating a serious threat to the habitats of both the desert tortoise and the Las Vegas bearpoppy in the Road 108 area. During construction of the access road at the high water mark, Las Vegas bearpoppy habitat would be disturbed, and, at minimum, 20 plants would be permanently destroyed.
Riparian Areas	Illegal off-road use in the area could erode soils, causing runoff into the wash where the Meadow Springs riparian area is located. Erosion and runoff into the wash could jeopardize and even destroy native plants in the springs.	Closure of Road 108 may result in the reduction of soil erosion from illegal off-road vehicle use into the Meadow Springs riparian area. Prevention of human-caused soil erosion may improve and protect habitat for the native plants and grasses in the riparian area.	Same as Alternative 2.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Air Quality	Minor, short-term impacts to air quality would occur from dust clouds created by motorized use of Road 108. These impacts would be localized to the Road 108 area.	Short-term, localized increases in dust and emissions would occur during construction and restoration periods. Impacts to air quality would be localized in the Road 108 project area, which includes the existing roadbed as well as the proposed access road. Impacts would only be for 2 to 3 weeks during the actual period when construction and restoration is occurring. Work would not be conducted on weekends or during other periods of high visitor use.	Same as alternative 2.
Cultural Resources	The cultural site located near Road 108 in the Meadow Springs wash area may be disturbed from illegal off-road use.	No cultural resources would be impacted in the area where the proposed access would be located.	Same as Alternative 2.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Visitor Use	Continued use of Road 108 would further impact the soils and harden the roadbed, creating terrain that would become increasingly difficult for vehicle use. Potential for vehicles to become stuck or stranded would increase. Visitors forced to illegally travel off-road may be subject to a citation, negatively impacting their experience.	Lakeshore access would increase. Visitor congestion in the area would be reduced. Traffic on the Stewarts Point access road may increase. Terrain for four-wheel drive users would decrease by approximately 1 mile. Visitation to Meadow Springs may increase. No permanent impacts would occur to visitor use of the vacation cabin site area. Noise pollution may temporarily increase in the project area. If water levels rise unexpectedly, the proposed access road may be submerged and visitor access to Blue Point Bay may be temporarily restricted until water levels drop below the level of the road. One additional mile of shoreline would be available to lake users.	Lakeshore access would increase. Visitor congestion in the area would be reduced. Traffic on the Stewarts Point access road may increase. Terrain for four-wheel drive users would decrease by 1 mile. Visitation to Meadow Springs would increase. No permanent impacts would occur to visitor use of the vacation cabin site area. Noise pollution may temporarily increase in the project area. The proposed access road would be constructed through washes that may flood out the road, restricting visitor access until such time as the road is repaired. One additional mile of shoreline would be available to lake users.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Safety	Safety would continue to be threatened as hazardous road would remain in place and cliff continues to erode closer to road edge. Hazardous road could potentially lead to accidents, injuries or fatalities. As travel on Road 108 becomes more difficult, emergency medical services may also have increasing difficulty accessing the area and reaching Blue Point Bay in a reasonable amount of time.	Construction of a new access road parallel to the shoreline would improve access for emergency medical vehicles and emergency response time to Blue Point Bay would be reduced. Visitors would no longer be able to access Road 108 in the area where it skirts the eroding cliff, reducing a major safety threat. Closure of Road 108 would eliminate a roadbed which has become increasingly difficult to use, thereby reducing the potential for vehicles to get stuck or break down.	Construction of a new access road parallel to the shoreline would improve access for emergency medical vehicles and emergency response time to Blue Point Bay would be reduced. Visitors would no longer be able to access Road 108 in the area where it skirts the eroding cliff, reducing a major safety threat. Closure of Road 108 would eliminate a roadbed which has become increasingly difficult to use, thereby reducing the potential for vehicles to get stuck or break down. The new access road would run through washes that may be flooded during the rainy season, posing a safety threat to visitors attempting to use the road during these periods.

TABLE 2. IMPACTS OF THE ALTERNATIVES MATRIX

Impact Topic	Alternative 1 No Action	Alternative 2 Environmentally Preferred Action	Alternative 3
Water Quality	No impacts would occur to water quality.	Increased shoreline access may result in increased visitor use, which could create litter and sanitation issues along the shoreline.	Same as alternative 2.
Recreation Area Operations	Illegal off-road travel would continue to cause resource damage. No additional lakeshore access would be provided. Additional law enforcement, maintenance and resource management presence may be required in the area to restore areas disturbed by illegal off-road vehicles, assist visitors who may be stuck or broke down, and place barriers an signs to help reduce illegal off-road travel.	Resource damage caused by illegal off-road travel would be reduced in this area. Lakeshore access would be increased. Proposed access road may be submerged if lake levels rise, resulting in temporary, unpredictable closures of the access road.	Resource damage caused by illegal off-road travel would be reduced in this area. Lakeshore access would be increased. Proposed access road would be constructed through washes, increasing the potential for the road to be flooded out. This could result in increased maintenance needs in the area for repair and rehabilitation work on the road.

ENVIRONMENTAL CONSEQUENCES

Assumptions for Impact Analysis

This section contains the environmental impacts, including direct and indirect effects and their significance to the alternatives. The analysis of the action alternatives assumes that Road 108 would be closed to motorized traffic and a portion of it restored into a walking trail. It also assumes that the mitigation identified in the *Mitigation and Monitoring* section of this environmental assessment would be implemented under any of the applicable action alternatives, as identified in each mitigation criteria.

In addition, cumulative impacts were analyzed for each impact topic within each alternative and the environmentally preferred alternative. Cumulative impacts are the incremental impacts on the environment resulting from adding the alternatives to other past, present, and reasonably foreseeable future actions. The cumulative impacts relate primarily to the implementation of objectives identified in the 1986 GMP, the 1999 RMP and other future actions which may occur at Lake Mead NRA.

Alternative 1 - No Action

Soils and Vegetation

Damage to rare plants and sensitive habitat from illegal off-road vehicle use would continue and potentially increase in the area.

Soils would be further eroded and impaired with additional widening of the road. Currently 9.8 acres of gypsum soil have been disturbed through the use of Road 108. If this road remains open to motorized vehicles, damage to the cryptogamic soil and the disturbed surface area would continue, and may increase, indefinitely. As the soil bed becomes increasingly disturbed, its ability to foster native vegetation decreases, impairing the overall health of the native plant species.

Cumulative Impacts: According to the 1999 RMP, illegal off-road use has resulted in some of the most significant detrimental impacts to the natural resources in the backcountry of the recreation area and has identified off-road travel as the greatest threat to soil resources. As the soil bed becomes increasingly disturbed, its ability to foster native vegetation decreases, impairing the overall health of the native ecosystem. Keeping a road open that continually forces users off the approved roadbed due to the difficult travel conditions would serve to increase these impacts indefinitely, further impairing the area's natural resources and contributing to the cumulative damage that has been caused by illegal off-road travel throughout the recreation area.

Conclusion: Since the overall condition of Road 108 forces many users from the main roadbed, an extensive amount of illegal off-road use has already damaged the soil bed. Currently 9.8 acres of disturbance have occurred in the Road 108 area and continued use of the road would increase the amount of disturbance. As the soil bed becomes increasingly disturbed, its ability to foster native vegetation decreases, impairing the overall health of native plant populations.

Wildlife

Continued illegal off-road vehicle use in the Road 108 area may increase the amount of disturbed or destroyed wildlife habitat. Destruction of habitat may permanently displace wildlife. Motorists traveling off-road may temporarily displace wildlife in the area during the time in which the vehicle is traveling through a habitat area.

Cumulative Impacts: No cumulative impacts would occur to wildlife**.**

Conclusion: Impacts to wildlife in the area would be localized to the area and may include temporary or permanent displacement of some wildlife. Although some animals may be permanently displaced, wildlife populations would not be permanently impaired.

Threatened and Endangered Species

Illegal off-road vehicle use could decrease the amount of available habitat for desert tortoises in the area. Loss of habitat may impair the desert tortoise population. Las Vegas bearpoppy habitat may be destroyed by illegal off-road travel. Adverse impacts to either of these species could pose serious threats or even impair the overall health of either or both species. These impacts would continue as long as Road 108 remains open to motorized vehicle use.

Cumulative Impacts: Since Road 108 is located in the habitat of a rare plant species, the Las Vegas bearpoppy, as well as an endangered animal species, the desert tortoise, continued illegal off-road use in the area could seriously threaten, endanger, or impair the overall health and existence of either or both of these species.

Conclusion: The Road 108 area encompasses habitat of the desert tortoise, an endangered animal species, and the Las Vegas bearpoppy, a rare plant species endemic to southern Nevada. Both of these species are threatened by continued illegal off-road use in the area, and over time such use could seriously impair the overall health of both species.

Riparian Areas

Illegal off-road vehicle use in the Road 108 area could erode soils, causing runoff into the wash where the Meadow Springs riparian area is located. Erosion and runoff in the wash could jeopardize and even destroy the native plants in the springs. Without the plant cover from the native grasses, the soils within the wash could also erode and runoff, impairing the overall health of the riparian area. These effects would continue as long as Road 108 remains open to motorized vehicle use.

Cumulative Impacts: No cumulative impacts would occur to riparian areas.

Conclusion: The Meadow Springs riparian area may suffer from soil erosion and runoff caused by continued illegal off-road use in the Road 108 area. Eventually, this runoff may impair the overall health of the native plant populations in the riparian area.

Air Quality

During the high-use season on Road 108, typically May through September, minor, short-term

impacts to air quality would continue from dust clouds created by motorized use of Road 108, as well as illegal off-road use. These impacts would be localized to the Road 108 area.

Cumulative Impacts: No cumulative impacts would occur to air quality.

Conclusion: Impacts to air quality would be minor, localized to the area and only occur when the road is actually being used. Air quality would not be permanently impaired.

Cultural Resources

If Road 108 remains open, the cultural site located near Road 108 in the Meadow Springs wash area may be disturbed or even destroyed by illegal off-road use as the site is accessible by vehicle, albeit not on the approved road.

Cumulative Impacts: No cumulative impacts would occur to cultural resources.

Conclusion: One cultural site may be impaired by continued illegal off-road use in the Road 108 area.

Visitor Use

Visitors would continue to use Road 108, further impacting the soils, damaging the roadbed, and creating terrain that would become increasingly difficult for vehicle use. In some cases, the road may become completely unusable and the difficult terrain could increase the potential for vehicles to illegally go off the road and possibly get stuck. Visitors forced to illegally travel off-road due to the difficult terrain may also be subjected to a citation, negatively impacting their experience at Lake Mead NRA. No additional lakeshore access would be provided and, as visitation increases in the area, visitors would be concentrated at Stewarts Point or Blue Point Bay, potentially increasing congestion and conflict in these locations. These impacts would continue as long as Road 108 remains open to motorized vehicles.

Cumulative Impacts: As visitation increases throughout the recreation area, accessible shoreline has become increasingly congested, concentrating visitors in use areas that are no longer adequate to provide an enjoyable recreational setting and accommodate all users. Due to this occurrence in other areas of the lake, the Overton Arm, particularly Stewarts Point, is enduring increased use from visitors seeking a less-congested, quieter environment in which to recreate. As use of the Overton Arm and Stewarts Point steadily increases, lack of additional shoreline access in the area would result in an overall increase in congested, and potentially negative recreational experiences throughout Lake Mead NRA.

Conclusion: The Stewarts Point area is receiving increased visitation from visitors seeking a dispersed recreational experience. If shoreline access in the area is not increased, visitor congestion and conflict in the area may increase, which may lead to visitors creating additional illegal access in order to be less congested, impairing the overall visitor experience in the area.

Safety

The hazardous road would remain in place and could lead to accidents, injuries, or fatalities. The cliff skirting the road may eventually erode to the point where the road becomes undercut and is

no longer passable. The potential for vehicles to become stuck or stranded would remain, and may increase, as the roadbed becomes increasingly difficult for travel. As travel on Road 108 becomes more difficult, emergency medical services may also have increasing difficulty accessing the area and reaching Blue Point Bay in a reasonable amount of time. As long as Road 108 is open, safety hazards would remain in place and could increase.

Cumulative Impacts: No cumulative impacts would occur to safety.

Conclusion: The eroding cliff skirting Road 108 is a serious safety hazard, as portions of the cliff may slough off without warning at any time, potentially taking a vehicle with it, causing serious injuries or even fatalities. In addition, the roadbed itself has become increasingly difficult to use, and the potential that motorists may become stuck or stranded has increased as the quality of the roadbed decreases. In some locations, the gypsum soil on which Road 108 is constructed may eventually erode to parent material, rendering it irreparable, forcing visitors further off the approved roadbed. These hazardous conditions could impair visitor safety.

Water Quality

Under this alternative no additional impacts would occur to water quality.

Cumulative Impacts: No cumulative impacts would occur.

Conclusion: Water quality would not be affected, nor impaired by the no action alternative.

Recreation Area Operations

Illegal off-road travel would continue to cause resource damage, resulting in additional law enforcement, resource, and maintenance staff needs in the area to restore areas affected by illegal off-road travel, assist visitors who may be stuck or broke down, and place barriers and signs to aid in the reduction of illegal off-road travel. Lakeshore access would not be increased to sufficiently accommodate increased visitor use in the area, an outcome which contradicts the 1986 GMP, as well as the Lake Mead NRA Strategic Plan. Area operations would be impacted in this manner as long as Road 108 remains open.

Cumulative Impacts: No cumulative impacts would occur to recreation area operations.

Conclusion: Continued use of Road 108 could result in additional staff needs for law enforcement, maintenance and resource management personnel in the area to restore areas affected by illegal off-road travel, assist visitors who may be stuck or broke down, and place barriers and signs to aid in the reduction of illegal off-road travel. The visitor experience could be impaired if the necessary staff is not available to address these issues.

Two goals of the 1986 GMP, the 1999 RMP, and the Strategic Management Plan are to increase shoreline access and decrease the amount of resource damage caused by illegal off-road use throughout the recreation area. The no action alternative does not address either of these objectives.

Alternative 2 - The Environmentally Preferred Alternative
Create a New Access Road Below High Water Mark

This section evaluates the impacts related to constructing a new access road parallel to the shoreline from Stewarts Point to Blue Point Bay, and closing existing Road 108 to motorized traffic and restoring a portion of it to a walking trail down to Meadow Springs.

Soils and Vegetation

With the closure of Road 108, illegal off-road vehicle use would be reduced. Damage to the rare plants and sensitive habitat surrounding Road 108 would decrease. The ability of the NPS to protect this habitat would increase. Disturbance of the soil in the Road 108 area would decrease with the road closure and elimination of illegal off-road vehicle use and restoration of the old roadbed would improve the overall soil quality. Eventually, native plants would return to the damaged soil and habitat would be restored. The natural restoration process is very slow and could take in excess of 20 years.

No impacts would occur to native vegetation in the area where the access road is proposed. Non-native salt cedar would be destroyed. This would have a beneficial effect, and aid in the long-term restoration of both the soils and the native plants in the area because the salt cedar increases the salt content of the soil and displaces native vegetation. Again, the natural restoration process is slow and could take in excess of 20 years.

Grading the proposed access road and spurs and constructing the post and cable fence would result in 2.56 acres of new surface disturbance. Soil in this area is relatively stable and would not need additional reinforcement. Due to the relatively flat nature of the terrain, no cut and fill would be needed, resulting in a manageable and sustainable road, with an expected lifespan of approximately 15 years, with only minor permanent disturbance and altering of the soils.

Cumulative Impacts: According to the 1999 RMP, illegal off-road use has resulted in some of the most significant detrimental impacts to the natural resources in the backcountry of the recreation area and has identified off-road travel as the greatest threat to soil resources. Closure of Road 108 would also reduce the cumulative damage caused throughout the recreation area by illegal off-road travel and protect unimpaired backcountry areas which may otherwise be harmed by future illegal off-road travel.

Conclusion: Since the overall condition of Road 108 forces many users from the main roadbed, closure of this road would greatly reduce the amount of resource damage and disturbance caused by illegal off-road use in the area. Construction of the proposed access road would disturb 2.56 acres, as compared to the 9.8 acres of disturbance that has occurred on and around the existing roadbed of Road 108. In all, a reduction of 7.24 acres of disturbance would take place by closing existing Road 108 and constructing a new road parallel to the shoreline from Stewarts Point to Blue Point Bay. Restoration of the old roadbed would improve the overall soil quality and eventually, native plants may return to the previously damaged soil and habitat may be restored. Further impairment of the soils and vegetation in the area of Road 108 would be prevented. Native vegetation and soils in the area where the access road is proposed would not be impaired.

Wildlife

Short-term disturbances from noise and heavy equipment operation during construction and restoration activities in the project area could temporarily disturb or displace some wildlife species for 2 to 3 weeks at the most.

In the Road 108 area, once the closure and restoration process was complete, protection of wildlife habitat would increase and the overall habitat condition may improve due to the elimination of the threat from illegal off-road vehicle travel.

The area where the access road is proposed is considered low-quality wildlife habitat due to the monoculture of non-native salt cedar and fluctuating lake levels. No permanent impacts would occur to wildlife in this area.

The restoration of the Meadow Springs area is expected to result in bird species repopulating the area.

Cumulative Impacts: No cumulative impacts would occur to wildlife.

Conclusion: Minor, short-term, temporary impacts would occur to wildlife during construction and restoration periods. No permanent impacts would occur to wildlife in the area where the proposed access road is located. Closure of Road 108 would result in increased protection of wildlife habitat in the area surrounding the roadbed. Although some animals may be temporarily displaced, wildlife populations would not be permanently impaired.

Threatened and Endangered Species

With the closure of Road 108, illegal off-road vehicle use in the area would decrease, reducing and possibly eliminating a serious threat to the habitats of both the Las Vegas bearpoppy and the desert tortoise in the area. In the long-term, overall habitat conditions for both species may improve significantly if left undisturbed by motorized vehicles. Las Vegas bearpoppies may repopulate restored areas within 10 years after restoration is complete.

Cumulative Impacts: Illegal off-road use in the Road 108 area threatens habitat of the Las Vegas bearpoppy, a rare plant species, as well as the desert tortoise, an endangered animal species. Elimination of a road that encourages illegal off-road use could prevent impairment of these species.

Conclusion: The Road 108 area encompasses habitat of the desert tortoise, an endangered animal species, and the Las Vegas bearpoppy, a rare plant species that only grows in certain areas. Closure of Road 108 to motorized vehicles would prevent illegal off-road travel in the area, reducing the threat to these species and improving overall habitat conditions in the area.

Riparian Areas

In the Meadow Springs area, closure of Road 108 may result in the reduction of potential soil erosion and runoff from illegal off-road use. Long-term effects of preventing human-caused erosion and runoff into the wash may improve and protect habitat for the native plants and grasses

that have recently been replanted in the area.

With the establishment of a walking trail to the area, Meadow Springs may receive increased visitation by foot. This would have no adverse impact to the area.

Cumulative Impacts: No cumulative impacts would occur to riparian areas.

Conclusion: Reduction of illegal off-road use in the Road 108 area may prevent soil erosion and runoff into the Meadow Springs riparian area, protecting recently restored native plants and grasses and preventing impairment of the riparian area.

Air Quality

Short-term, localized increases in dust and emissions would occur during construction and restoration periods. These impacts would occur only around the Road 108 project area, which includes the existing roadbed as well as the proposed access road, and would only be for 2 to 3 weeks during the actual period when construction is occurring. No work would be conducted on weekends during periods of high visitation.

Cumulative Impacts: Air quality would not be impaired.

Conclusion: All impacts to air quality would be minor, short-term, occur only during construction and restoration activities, and localized to the project area.

Cultural Resources

Surveys conducted in the area where the proposed access road would be located found that no cultural resources exist in this area. The National Park Service has determined that the environmentally preferred alternative will have no effect on cultural resources.

One cultural site is located near Meadow Springs wash, adjacent to Road 108. Closure of Road 108 would protect this site from disturbance or impairment by illegal off-road vehicle use. With proper mitigation efforts in place, this site would not be impacted during the restoration of Road 108.

Cumulative Impacts: No cumulative impacts would occur to cultural resources.

Conclusion: Closure of Road 108 would prevent one cultural resource site in the area from being impaired. Cultural resources would not be impaired in the area where the proposed access road would be located.

Visitor Use

Visitation to Meadow Springs may increase, as it would become a visitor destination point. Challenging terrain for four-wheel drive users would decrease by 1 mile. Since there are approximately 800 miles of approved road within the recreation area, many that offer challenging terrain for four-wheel drive enthusiasts, this closure would not be significant. Visitors may be impacted during construction and restoration periods. These impacts would be short-term,

localized in the project area, approximately 2 to 3 weeks, and in order to accommodate high-use periods, no construction activities would occur during any weekends.

With increased lakeshore access, visitors would be routed to at least three different shoreline areas via the spur roads. This would spread out visitor use along the shoreline and could reduce congestion at Stewarts Point and Blue Point Bay. Traffic on the Stewarts Point access road may increase. No permanent impacts would occur to visitor use of the vacation cabin site area.

If water levels rise unexpectedly, the proposed access road may be submerged and visitor access to Blue Point Bay may be temporarily restricted until water levels drop below the level of the road.

Cumulative Impacts: As visitation increases throughout the recreation area, accessible shoreline has become increasingly congested, concentrating visitors in use areas that are no longer adequate to provide an enjoyable recreational setting and accommodate all users. Due to this occurrence in other areas of the lake, the Overton Arm, particularly Stewarts Point, is enduring increased use from visitors seeking a less-congested, quieter environment in which to recreate. As use of the Overton Arm steadily increases, additional accessible shoreline in the area would reduce the potential for visitors to be crowded into a small area at Stewarts Point and Blue Point Bay, in turn reducing overall visitor congestion and conflicts in the area.

Conclusion: The Stewarts Point area is receiving increased visitation from visitors seeking a dispersed recreational experience. Increased shoreline access in the area would serve to maintain this experience, spread out visitor use along the shore, prevent visitors from being crowded into small areas at Stewarts Point and Blue Point Bay, reduce congestion and potential conflict, and prevent impairment of the visitor experience in the area.

There is a chance that water levels may rise unexpectedly and submerge the proposed access road, restricting visitors from accessing Blue Point Bay.

<u>Safety</u>
Construction of a new road parallel the shoreline would improve access for emergency medical vehicles and emergency response time to Blue Point Bay would be reduced.

A major safety hazard would be eliminated since visitors would no longer be able to access Road 108 in the area where it skirts the eroding cliff. The closure of Road 108 would reduce illegal off-road travel in the area, as well as eliminate a roadbed which has become increasingly difficult to use, thereby reducing the potential for vehicles to get stuck or break down.
Cumulative Impacts: Visitor safety would not be impaired.

Conclusion: The eroding cliff skirting Road 108 is a serious safety hazard, as portions of the cliff continue to erode and slough off without warning. Closure of Road 108 would prevent visitors from being able to access this extreme safety hazard via motorized vehicle, potentially preventing a major accident causing serious injuries or even fatalities. Since Road 108 itself has become increasingly difficult to use, closure of this road would reduce the potential for vehicles to become

stuck or stranded. Construction of a new road along the shoreline would improve access for emergency medical personnel in the area.

Water Quality

A new road that provides additional shoreline access may lead to increased visitor use and could create litter and sanitation issues along the shoreline from Stewarts Point to Blue Point Bay. Education and proposed policies relating to the use of porta-potties would reduce this impact.

Cumulative Impacts: Water quality in the recreation area would not be impaired.

Conclusion: Water quality may be adversely affected by increased visitation to the area, however, this impact can be reduced through education and implementation of proposed policies relating to the use of porta-potties.

Recreation Area Operations

The proposed access road may be submerged if the lake level rises unexpectedly over the next 15 years. This could result in temporary, unpredictable closures of the access road.

Lakeshore access opportunities would increase. If this results in an increase in visitation, additional law enforcement and maintenance staff presence would be needed in the area. With the closure of Road 108, resource management staff needs in the area may decrease over time. As illegal off-road travel would be reduced, less signage, barricades and restoration would be needed in the area.

Resource damage caused by illegal off-road travel would be reduced. This alternative may provide a safer recreational environment and promote protection of the natural and cultural resources of the area. Overton Power would not be impacted as access to the powerline road would still be available.

Cumulative Impacts: Recreation area operations would not be impaired.

Conclusion: Increased shoreline access between Stewarts Point and Blue Point Bay may result in increased visitation in the area, resulting in the need for additional law enforcement and maintenance staff presence. With the closure of Road 108, resource management staff needs in the area may decrease. As illegal off-road travel would be reduced, less signage, barricades and restoration would be needed.

The proposed access road may be submerged if the lake level rises unexpectedly over the next 15 years. However, according to the 2000 Colorado River Interim Surplus Criteria EIS, water levels for Lake Mead are predicted to decrease over the next 15 years, and it is likely that lake elevation will not exceed 1190 feet during most of this period.

Two goals of the 1986 GMP, the 1999 RMP, and the Strategic Management Plan are to increase shoreline access and decrease the amount of resource damage caused by illegal off-road use throughout the recreation area. The environmentally preferred alternative is in line with both of

these objectives.

Alternative 3
Create an Access Road at High Water Mark

This section evaluates the impacts related to closing existing Road 108 to motorized traffic and restoring it to a walking trail down to Meadow Springs. A new access road would be constructed parallel to the shoreline at the high water mark from Stewarts Point to Blue Point Bay.

Soils and Vegetation
With the closure of Road 108, illegal off-road vehicle use would be reduced. Damage to the rare plants and sensitive habitat surrounding Road 108 would decrease. The ability of the NPS to protect this habitat would increase. Disturbance of the soil in the Road 108 area would decrease with the road closure and elimination of illegal off-road vehicle use and restoration of the old roadbed would improve the overall soil quality. Eventually, native plants would return to the damaged soil and habitat would be restored. The natural restoration process is very slow and can take in excess of 20 years.

Las Vegas bearpoppy habitat would be disturbed, and, at a minimum, 20 plants would be permanently destroyed by the construction of the access road along the high water mark, possibly impairing the overall health of the species. Salt cedar would be destroyed, a beneficial effect, which would aid in the long-term restoration of both the soils and the native plants in the area. Again, the natural restoration process is slow and can take in excess of 20 years.

The soils where the access road is proposed are not stable enough for a roadbed and would need to be reinforced, possibly altering the soil structure. Grading the road and the fingers, constructing the post and cable fence, constructing the culverts, and doing the necessary cut and fill work would result in 3.89 acres of new surface disturbance.

Cumulative Impacts: According to the 1999 RMP, illegal off-road use has resulted in some of the most significant detrimental impacts to the natural resources in the backcountry of the recreation area and has identified off-road travel as the greatest threat to soil resources. Closure of Road 108 would also reduce the cumulative damage caused throughout the recreation area by illegal off-road travel and protect unimpaired backcountry areas which may otherwise be harmed by future illegal off-road travel.

Construction of an access road through Las Vegas bearpoppy habitat could impair the overall health of the species, as these plants only grow in certain isolated locations.

Conclusion: Since the overall condition of Road 108 forces many users from the main roadbed, closure of this road would greatly reduce the amount of resource damage and disturbance caused by illegal off-road use in the area. Construction of the proposed access road would disturb 3.89 acres, as compared to the 9.8 acres of disturbance that has occurred on and around the existing roadbed of Road 108. In all, a reduction of 5.91 acres of disturbance would take place by closing

existing Road 108 and constructing a new road at the high water mark parallel to the shoreline from Stewarts Point to Blue Point Bay. Restoration of the old 108 roadbed would improve the overall soil quality and eventually, native plants would return to the previously damaged soil and habitat would be restored.

Construction of an access road through Las Vegas bearpoppy habitat could impair the overall health of the species, as these plants only grow in certain isolated locations.

Wildlife
Same as alternative 2.

Cumulative Impacts: Same as Alternative 2.

Conclusion: Same as Alternative 2.

Threatened and Endangered Species
With the closure of Road 108, illegal off-road vehicle use in the area would decrease, reducing and possibly eliminating a serious threat to the habitats of both the Las Vegas bearpoppy and the desert tortoise in the area. In the long-term, overall habitat conditions for both species may improve significantly in the Road 108 area if left undisturbed by motorized vehicles. Las Vegas bearpoppies may repopulate restored areas within 10 years after restoration is complete.

The area where the access road is proposed is Las Vegas bearpoppy habitat. Construction of a road along the high water mark would permanently destroy, at a minimum, 20 plants. This species is rare and only grows in certain locations and destruction of these plants may threaten or impair the overall health of the species.

Cumulative Impacts: Illegal off-road use in the Road 108 area threatens habitat of the Las Vegas bearpoppy, a rare plant species, as well as the desert tortoise, an endangered animal species. Elimination of a road that encourages illegal off-road use would reduce the overall impairment of these species and the other resources in the area.

The proposed access road along the high water mark runs through Las Vegas bearpoppy habitat and construction of such a road would destroy some plants. Since this species only grows in certain isolated locations, destruction of these plants may impair the overall health of the species.

Conclusion: The Road 108 area encompasses habitat of the desert tortoise, an endangered animal species, and the Las Vegas bearpoppy, a rare plant species that only grows in certain areas. Closure of

Road 108 to motorized vehicles would prevent illegal off-road travel in the area, reducing the threat to these species and improving overall habitat conditions in the area.

The area where the proposed access road would be located runs through Las Vegas bearpoppy habitat and construction of the road would destroy some plant specimens. Since this species of

plant only grows in certain isolated locations, destruction of these plants could threaten or impair the health of the species.

Riparian Areas
Same as alternative 2.

Cumulative Impacts: Same as Alternative 2.

Conclusion: Same as Alternative 2.

Air Quality
Same as alternative 2.

Cumulative Impacts: Same as Alternative 2.

Conclusion: Same as Alternative 2.

Cultural Resources
Same as alternative 2.

Cumulative Impacts: Same as Alternative 2.

Conclusion: Same as Alternative 2.

Visitor Use
Visitation to Meadow Springs may increase, as it would become a visitor destination point. Challenging terrain for four-wheel drive users would decrease by 1 mile. Since there are approximately 800 miles of approved road within the recreation area, many that offer challenging terrain for four-wheel drive enthusiasts, this closure would not be significant. Visitors may be impacted during construction and restoration periods. These impacts would be short-term, localized in the project area, approximately 2 to 3 weeks, and in order to accommodate high-use periods, no construction activities would occur during any weekends.

With increased lakeshore access, visitors would be routed to at least three different areas via the spur roads. This would spread out visitor use along the shoreline and could reduce congestion at Stewarts Point and Blue Point Bay. Traffic on the Stewarts Point access road may increase. No permanent impacts would occur to visitor use of the vacation cabin site area.

The proposed access road would be constructed through washes that may flood out the road, restricting visitor access until such time as the road is repaired.

Cumulative Impacts: As visitation increases throughout the recreation area, accessible shoreline has become increasingly congested, concentrating visitors in use areas that are no longer adequate to provide an enjoyable recreational setting and accommodate all users. Due to this occurrence in other areas of the lake, the Overton Arm, particularly Stewarts Point, is enduring increased use

from visitors seeking a less-congested, quieter environment in which to recreate. As use of the Overton Arm steadily increases, additional accessible shoreline in the area would reduce the potential for visitors to be crowded into a small area at Stewarts Point and Blue Point Bay, in turn reducing overall visitor congestion and conflicts in the area.

Conclusion: The Stewarts Point area is receiving increased visitation from visitors seeking a dispersed recreational experience. Increased shoreline access in the area would serve to maintain this experience, spread out visitor use along the shore, prevent visitors from being crowded into small areas at Stewarts Point and Blue Point Bay, reduce congestion and potential conflict, and prevent impairment of the visitor experience in the area.

There is a chance that the proposed access road would wash out in some locations during the rainy season, restricting access to Blue Point Bay.

Safety

Construction of a new road parallel to the shoreline would improve access for emergency medical vehicles and emergency response time to Blue Point Bay would be reduced.

A major safety hazard would be eliminated since visitors would no longer be able to access Road 108 in the area where it skirts the eroding cliff. The closure of Road 108 would reduce illegal off-road travel in the area, as well as eliminate a roadbed which has become increasingly difficult to use, thereby reducing the potential for vehicles to get stuck or break down.

The area where the new access road would be located runs through various washes that may flood during the rainy season, washing out the road and potentially posing a safety threat to visitors attempting to use the road during these periods.

Cumulative Impacts: Public safety would not be impaired.

Conclusion: The eroding cliff skirting Road 108 is a serious safety hazard, as portions of the cliff continue to erode and slough off without warning. Closure of Road 108 would prevent visitors from being able to access this extreme safety hazard via motorized vehicle, potentially preventing a major accident causing serious injuries or even fatalities. Since Road 108 itself has become increasingly difficult to use, closure of this road would reduce the potential for vehicles to become stuck or stranded. The construction of a new access road parallel to the shoreline along the high water mark would improve access for emergency medical personnel in the area.

Since the proposed access road would be constructed through some washes, a safety threat may exist if visitors attempt to use the road during these periods.

Water Quality

Same as alternative 2.

Cumulative Impacts: Same as Alternative 2.

Conclusion: Same as Alternative 2.

Recreation Area Operations

The proposed access road is at high water mark so it is not likely to be submerged by rising lake levels. Since the access road would be constructed through washes, it may be difficult to maintain and the potential exists for portions of the road to be washed out. This could result in increased maintenance needs in the area for repair and rehabilitation work on the road, as well as a road that is not easily sustainable.

Lakeshore access opportunities would increase. If this results in an increase in visitation, additional law enforcement and maintenance staff presence would be needed in the area. With the closure of Road 108, resource management staff needs in the area may decrease over time. As illegal off-road travel would be reduced, less signage, barricades and restoration would be needed in the area.

Resource damage caused by illegal off-road travel would be reduced. This alternative may provide a safer recreational environment and promote protection of the natural and cultural resources of the area. Overton Power would not be impacted as access to the powerline road would still be available.

Cumulative Impacts: Recreation area operations would not be impaired.

Conclusion: The Stewarts Point area is receiving increased visitation from visitors seeking a quieter, less congested recreational experience. Increased shoreline access in the area would serve to maintain this experience, spread out visitor use along the shore, prevent visitors from being crowded into small areas at Stewarts Point and Blue Point Bay, and reduce congestion and potential conflict in the area.

Increased shoreline access between Stewarts Point and Blue Point Bay may result in increased visitation in the area, resulting in the need for additional law enforcement and maintenance staff presence. With the closure of Road 108, resource management staff needs in the area may decrease. As illegal off-road travel would be reduced, less signage, barricades and restoration would be needed.

The proposed access road runs through a variety of washes and may be subjected to flooding and washouts, jeopardizing visitor safety and increasing maintenance needs in the area.

Two goals of the 1986 GMP, the 1999 RMP, and the Strategic Management Plan are to increase shoreline access and decrease the amount of resource damage caused by illegal off-road use throughout the recreation area. This alternative is in line with both of these objectives.

COORDINATION AND CONSULTATION

Public notice of the availability of this environmental assessment was published in local newspapers, and on the Lake Mead National Recreation Area website. Individuals and organizations could request the environmental assessment in writing, by phone, or by e-mail. The environmental assessment was circulated to individuals, businesses, and organizations on the park's mailing list for a 30-day public review period.

This document was prepared by Kris Meredith, Concessions Management Specialist, National Park Service, Lake Mead National Recreation Area.

The following persons and agencies were consulted during the preparation of this environmental assessment.

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- Moapa Tribe
- Kaibab Tribe
- Las Vegas Group

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GLOSSARY OF ACRONYMS

EIS – Environmental Impact Statement
GMP – General Management Plan
MSHCP – Multiple Species Habitat Conservation Plan
NPS – National Park Service
NRA – National Recreation Area
RMP – Resource Management Plan

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